SEQUENCE LISTING

<110> Philip E.Branton et al.

<120> Adenovirus E4 Proteins For Inducing Cell Death

<130> 50013/002003

<140> 09/214,478
<141> 1997-07-03

<150> 60/021,273
<151> 1996-07-05

<150> 60/028,740
<151> 1996-10-22

<150> IB97/01041
<151> 1997-07-03

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 885
<212> DNA
<213> Adenovirus

<400> 1
atgactacgt ccggcgttcc atttggcatg acactacgac caacacgatc tcggttgtct 60
cggcgcactc cgtacagtag ggatcgtcta cctccttttg agacagaaac ccgcgctacc 120
atactggagg atcatccgct gctgcccgaa tgtaacactt tgacaatgca caacgtgagt 180
tacgtgcgag gtcttccctg cagtgtggga tttacgctga ttcaggaatg ggttgttccc 240
tgggatatgg ttctaacgcg ggaggagctt gtaatcctga ggaagtgtat gcacgtgtgc 300
ctgtgttgtg ccaacattga tatcatgacg agcatgatga tccatggtta cgagtcctgg 360
gctctccact gtcattgttc cagtcccggt tccctgcagt gtatagccgg cgggcaggtt 420
ttggccagct ggtttaggat ggtggtggat ggcgccatgt ttaatcagag gtttatatgg 480
taccgggagg tggtgaatta caacatgcca aaagaggtaa tgtttatgtc cagcgtgttt 540
atgaggggtc gccacttaat ctacctgcgc ttgtggtatg atggccacgt gggttctgtg 600
gtccccgcca tgagctttgg atacagcgcc ttgcactgtg ggattttgaa caatattgtg 660
gtgctgtgct gcagttactg tgctgattta agtgagatca gggtgcgctg ctgtgcccgg 720
aggacaaggc gccttatgct gcgggcggtg cgaatcatcg ctgaggagac cactgccatg 780
ttgtattcct gcaggacgga gcggcggcgg cagcagttta ttcgcgcgct gctgcagcac 840
caccgcccta tcctgatgca cgattatgac tctaccccca tgtag 885

<210> 2
<211> 294
<212> PRT

<213> Adenovirus

<400> 2

```
Met Thr Thr Ser Gly Val Pro Phe Gly Met Thr Leu Arg Pro Thr Arg
 1               5                  10                  15
Ser Arg Leu Ser Arg Arg Thr Pro Tyr Ser Arg Asp Arg Leu Pro Pro
            20                  25                  30
Phe Glu Thr Glu Thr Arg Ala Thr Ile Leu Glu Asp His Pro Leu Leu
        35                  40                  45
Pro Glu Cys Asn Thr Leu Thr Met His Asn Val Ser Tyr Val Arg Gly
    50                  55                  60
Leu Pro Cys Ser Val Gly Phe Thr Leu Ile Gln Glu Trp Val Val Pro
65                  70                  75                  80
Trp Asp Met Val Leu Thr Arg Glu Glu Leu Val Ile Leu Arg Lys Cys
                85                  90                  95
Met His Val Cys Leu Cys Cys Ala Asn Ile Asp Ile Met Thr Ser Met
            100                 105                 110
Met Ile His Gly Tyr Glu Ser Trp Ala Leu His Cys His Cys Ser Ser
        115                 120                 125
Pro Gly Ser Leu Gln Cys Ile Ala Gly Gly Gln Val Leu Ala Ser Trp
    130                 135                 140
Phe Arg Met Val Val Asp Gly Ala Met Phe Asn Gln Arg Phe Ile Trp
145                 150                 155                 160
Tyr Arg Glu Val Val Asn Tyr Asn Met Pro Lys Glu Val Met Phe Met
                165                 170                 175
Ser Ser Val Phe Met Arg Gly Arg His Leu Ile Tyr Leu Arg Leu Trp
            180                 185                 190
Tyr Asp Gly His Val Gly Ser Val Val Pro Ala Met Ser Phe Gly Tyr
        195                 200                 205
Ser Ala Leu His Cys Gly Ile Leu Asn Asn Ile Val Val Leu Cys Cys
    210                 215                 220
Ser Tyr Cys Ala Asp Leu Ser Glu Ile Arg Val Arg Cys Cys Ala Arg
225                 230                 235                 240
Arg Thr Arg Arg Leu Met Leu Arg Ala Val Arg Ile Ile Ala Glu Glu
                245                 250                 255
Thr Thr Ala Met Leu Tyr Ser Cys Arg Thr Glu Arg Arg Arg Gln Gln
            260                 265                 270
Phe Ile Arg Ala Leu Leu Gln His His Arg Pro Ile Leu Met His Asp
        275                 280                 285
Tyr Asp Ser Thr Pro Met
    290
```

<210> 3
<211> 345
<212> DNA
<213> Adenovirus

<400> 3

```
atggttcttc cagctcttcc cgctcctccc gtgtgtgact cgcagaacga atgtgtaggt      60
tggctgggtg tggcttattc tgcggtggtg gatgttatca gggcagcggc gcatgaagga     120
gtttacatag aacccgaagc caggggggcgc ctggatgctt tgagagagtg gatatactac     180
```

aactactaca cagagcgatc taagcggcga gaccggagac gcagatctgt ttgtcacgcc 240
cgcacctggt tttgcttcag gaaatatgac tacgtccggc gttccatttg gcatgacact 300
acgaccaaca cgatctcggt tgtctcggcg cactccgtac agtag 345

<210> 4
<211> 114
<212> PRT
<213> Adenovirus

<400> 4
Met Val Leu Pro Ala Leu Pro Ala Pro Pro Val Cys Asp Ser Gln Asn
1 5 10 15
Glu Cys Val Gly Trp Leu Gly Val Ala Tyr Ser Ala Val Val Asp Val
20 25 30
Ile Arg Ala Ala Ala His Glu Gly Val Tyr Ile Glu Pro Glu Ala Arg
35 40 45
Gly Arg Leu Asp Ala Leu Arg Glu Trp Ile Tyr Tyr Asn Tyr Tyr Thr
50 55 60
Glu Arg Ser Lys Arg Arg Asp Arg Arg Arg Arg Ser Val Cys His Ala
65 70 75 80
Arg Thr Trp Phe Cys Phe Arg Lys Tyr Asp Tyr Val Arg Arg Ser Ile
85 90 95
Trp His Asp Thr Thr Thr Asn Thr Ile Ser Val Val Ser Ala His Ser
100 105 110
Val Gln